L7 ANSWER 5 OF 6 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1976-52216X [28] WPIDS
TI Modified ethylene copolymers - by reacting ethylene with comonomer, unsaturated retardant, and polyfunctional peroxide.
DC A17 A82 E19 E36
PA (RATZ-I) RATZSCH M
CYC 1

PI DD 119797 A 19760512 (197628)*
PRAI DD 1975-184961 19750324
IC C08F001-82; C08F002-40; C08F003-04; C08F210-02
AB DD 119797 A UPAB: 19930901
Modified ethylene polymers are prepd. by reacting ethylene in a tubular reactor at 250-340 degrees C, and >500 atmos, in the presence of (1) a co-reactant, e.g. vinyl acetate, acrylic acid, styrene or substd. vinylbenzenes, (2) a free radical initiator, e.g. oxygen, a dialkyl peroxide, or percarbonate, (3) a retarding cpd. of formula: (where X is H or Cl; R1 and R2 are H, alkyl or vinyl; or R' and X together are CH2) in a concn. of 0.001-25 esp. 0.001-10 vol.% and (4) a polyfunctional peroxide. Gives high yields of polymers that are esp. useful for extrusion coating of materials such as paper and aluminium foil. The coatings are smooth, glossy and tough.
FS CPI

L5 ANSWER 30 OF 32 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1980-63174C [36] WPIDS
TI Heat resistant, high strength packaging film prodn. - by mixing ethylene polymers then extruding, avoiding use of antioxidant.
DC A17 A92 Q34
PA (SEJJ) JUJO PAPER CO LTD; (SUJO-N) SUJO PAPER MFG KK
CYC 1
PI JP 55097928 A 19800725 (198036)*
JP 61012774 B 19860410 (198619)
PRAI JP 1979-5866 19790120
IC B29C047-86; B29D007-02; B29K023-00; B29L007-00; B65D065-02; C08L023-02
AB JP 55097928 A UPAB: 19930902
50-95 Pts. wt. of (A) ethylene polymer and 50-5 pts. wt. of (B) ethylene polymer are mixed and the mixt. is moulded by extrusion at 260-320 degrees C. (A) is produced by high-pressure polymerisation method and has a density of 0.930-0.940 and is resistant to temps. of >107 degrees C. (B) is produced by high-pressure polymerisation method and has a density of 0.900-0.929.

The packaging film has excellent break strength, tensile strength, transparency, tackiness, etc. and is resistant to temps. of above 107 degrees C. Pref. (A) are produced by polymerising ethylene in the presence of a radical polymerisation initiator, if necessary in a solvent, e.g. methanol, cyclohexane, at above 400 atmos. and at 50-400 degrees C. Pref. (B) is produced by polymerising ethylene in the presence of a radical polymerisation initiator, if necessary, along with a polymerisation-modifying agent, at 40-300 degrees C and above 400 atmos.

FS CPI GMPI
FA AB
MC [illegible]

L5 ANSWER 14 OF 32 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1989-241974 [34] WPIDS
DNC C1989-107768
TI Mixts. of low-density polyethylene(s) mfd. - by mixing tube-reactor PE's which differ by less than 20 deg. C in polymerisation temp. range and less than 0.1 in mean contraction factor.
DC A17
IN BAUMANN, H J; ECKHARDT, G; GEHRMANN, K; MEINKE, H J; NOGLIK, H; SCHAAR, E
PA (VELW) VEB LEUNA-WERKE ULBRICHT W
CYC 1
PI DD 266000 A 19890322 (198934)* 3p
ADT DD 266000 A DD 1985-280929 19850924
PRAI DD 1985-280929 19850924
IC C08L023-06
AB DD 266000 A UPAB: 19930923
Mixts. of low density polyethylenes (I) are claimed, obtd. by premixing granular polyethylenes (II) and opt. then homogenising in the melt; (II) are produced by radical high-pressure polymerisation in a tube reactor under conditions such that the polymerisation temp. range (delta-T; defined as the difference between the temp. of the charge in the reactor and the max. reactor temp.) differs by less than 20 deg.C, and the difference in the mean contraction factors of (II) (delta-CF) is below 0.1. Pref., the mixts. comprise 2 components in the ratio 1:20-20:1.
USE/ADVANTAGE - (I) are useful for the prodn. of packaging-and heavy-duty-film. The mixts. can be made economically with a predetermined, stable profile of properties, from tube-reactor PE components which do not comply with specifications.
0/0

L7 ANSWER 3 OF 6 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1992-324542 [40] WPIDS
DNC C1992-144228
TI Ethylene (co)polymer(s) with wide mol. wt. distribution - by radical-initiated polymerisation in 2-zone tubular reactor, with ratio of polymer concns. in zones 1 and adjusted to given valve.
DC A17
IN ANDRESEN, D; GEBAUER, M; GEHRMANN, K; GUTSCHALK, B; LAUTERBACH, W; SCHUELER, P; ZSCHOCH, W
PA (VELW) LEUNA-WERKE AG .
CYC 1
PI DE 4109059 A 19920924 (199240)* 9p C08F010-02
ADT DE 4109059 A DE 1991-4109059 19910320
PRAI DE 1991-4109059 19910320
IC ICM C08F010-02
ICS C08F002-34; C08F004-32
AB DE 4109059 A UPAB: 19931115
A process is claimed for the prod. of ethylene homo and copolymers with a wide mol. wt. distribution (I), in 2-zone, tubular reactor systems with length/dia. (L/D) ratio 4000-20,000, at 150-250 MPa and 413-598 K in the presence of radical initiators and opt. mol. wt. regulators and comonomers; the ratio of polymer concns. in the 1st and 2nd reaction zones is set at (0.65-0.85):1.

The above ratio is specifically adjusted by adding to zone 1 and/or 2 another peroxide with 1-min. half-life temp. = 383-403 K (II) at a point in the zone(s) when the temp. of the reaction mixt. has fallen from its peak value to 533-543 K; (II) can also be bifunctional peroxide with the same of different substits. on the -O-O- gp., esp. pref. 2,2-bis-(tert.-butyl-peroxy)-butane (IIA) or 2,5-dimethylhexane-2-tert.-butylperoxy-5 -perpivalate (IIB).

USE/ADVANTAGE - Modified tubular-reactor polymerisation is used for prodn. of ethylene (co)polymers with a wide mol. wt. distribution, suitable for use esp. in extrusion coating processes with large coating widths and high take-off speeds; the modification enables increased monomer conversion, to give polymers with good barrier properties and no processing de

Dwg.0/0
FS CPI
FA AB
MC CPI: A04-G01A; A04-G02A; A10-B01

L7 ANSWER 1 OF 6 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1999-387484 [33] WPIDS
DNC C1999-114147
TI Medium density ethylene polymers prepared using carbonyl chain transfer agent(s).
DC A17 A32 A60 A94 E17 G02
IN MEZQUITA, J M; WEVERS, R; ZUERCHER, K
PA (DOWC) DOW CHEM CO
CYC 84
PI EP 928797 A1 19990714 (199933)* EN 16p C08F010-02
R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
WO 9935175 A1 19990715 (199935) EN
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9923155 A 19990726 (199952) C08F010-02
EP 1047718 A1 20001102 (200056) EN C08F010-02
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
NO 2000003560 A 20000905 (200057) C08F000-00
CZ 2000002586 A3 20001011 (200060) C08F010-02
BR 9907206 A 20010130 (200110) C08F010-02
CN 1288474 A 20010321 (200137) C08F010-02
HU 2001001073 A2 20010730 (200157) C08F010-02
ADT EP 928797 A1 EP 1998-200054 19980112; WO 9935175 A1 WO 1999-US576 19990111; AU 9923155 A AU 1999-23155 19990111; EP 1047718 A1 EP 1999-903039 19990111, WO 1999-US576 19990111; NO 2000003560 A WO 1999-US576 19990111, NO 2000-3560 20000711; CZ 2000002586 A3 WO 1999-US576 19990111, CZ 2000-2586 19990111; BR 9907206 A BR 1999-7206 19990111, WO 1999-US576 19990111; CN 1288474 A CN 1999-802125 19990111; HU 2001001073 A2 WO 1999-US576 19990111, HU 2001-1073 19990111
FDT AU 9923155 A Based on WO 9935175; EP 1047718 A1 Based on WO 9935175; CZ 2000002586 A3 Based on WO 9935175; BR 9907206 A Based on WO 9935175; HU 2001001073 A2 Based on WO 9935175
PRAI EP 1998-200054 19980112
IC ICM C08F000-00; C08F010-02
ICS C08F004-32
AB EP 928797 A UPAB: 19990819

NOVELTY - Addition of 0.1-0.5 wt.% of aldehyde or ketone units during free radical polymerization of ethylene, gives a polymer of higher density within molecular weight distribution of 3-10, and increases adhesion and stiffness and improves melt application properties.

DETAILED DESCRIPTION - An ethylene homo- or copolymer, having a density of 0.923-0.935 g/cm3 and a molecular weight distribution (Mw/Mn) of 3-10, comprises 0.1-0.5 weight % of units derived from a carbonyl group-containing compound.

INDEPENDENT CLAIMS are also included for the following:

(a) Free radical polymerization process which involves reacting ethylene and, optionally, a comonomer at 1600-4000 kg/cm2 and 150-330 deg. C in an autoclave, optionally plus tubular reactors, with free radical initiators and a carbonyl compound; and

(b) use of a carbonyl compound as chain transfer agent to increase adhesion, water vapor barrier properties, reduce the coefficient of friction and improve stiffness of a polymer composition.

USE - Homo- or copolymers of ethylene containing chain transfer agents e.g. low-density polyethylene, are used in extrusion coating (claimed) and blown and cast films.

ADVANTAGE - Adhesion, water vapor barrier properties, and stiffness of the polymer obtained are high, coefficient of friction is lowered and melt application can be carried out at higher viscosity, lower temperature and with reduced off-taste to water.

Dwg.0/0

L14 ANSWER 1 OF 3 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 2001-062477 [08] WPIDS
DNC C2001-017564
TI Ethylene copolymer useful for production of polyamide molding compositions, contains alkyl(meth)acrylates and has low residual comonomer content.
DC A17 A60
IN DECKERS, A; WEBER, W
PA (BADI) BASF AG
CYC 21
PI DE 19922104 A1 20001123 (200108)* 4p C08F210-02
WO 2000069929 A1 20001123 (200108) DE C08F210-02
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP KR US
ADT DE 19922104 A1 DE 1999-19922104 19990517; WO 2000069929 A1 WO 2000-EP3969 20000503
PRAI DE 1999-19922104 19990517
IC ICM C08F210-02
ICS C08F002-00; C08F220-18; C08L023-04; C08L077-00
ICI C08F220:10; C08F220:06; C08F210-02
AB DE 19922104 A UPAB: 20010207
NOVELTY - An ethylene copolymer (I) contains 1-39 mole % of alkyl(meth)acrylates and optionally other comonomers. (I) has a residual comonomer content of less than 0.5 wt.%.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a process for the production of (I) by carrying out the polymerization in a combination of a stirred **autoclave reactor** and a **tubular reactor**. The monomer **mixture** is first polymerized in the stirred **autoclave** followed by polymerization in the **tubular reactor** at a higher temperature.
USE - The copolymer (I) is useful for the production of polyamide molding compositions. (claimed)
ADVANTAGE - The copolymer (I) has a low residual monomer content.
Dwg.0/0
FS CPI